

Tomas Lobo on the Way to His Hoop Dream

At 19, Tomas Lobo has the world by the tail.

A below-the-knee amputee, he's at Oklahoma State University on a full scholarship to play wheelchair basketball. Although he's only started his studies in late August, he is very excited about the opportunities that await him.

Tomas has had a bit of a rough road in getting to OSU. He didn't finish his last year of high school due to a series of medical procedures and four surgeries that encompassed almost the entire year. That, in turn, meant that several of the colleges that were interested in recruiting him for wheelchair basketball lost interest.

But OSU came through, and offered Tomas a spot on the wheelchair team through its Gateway Program, which allows Tomas to catch up on his academic requirements while still training with the team. He is a red shirt, which means he won't play for another year.

"I need to keep my grade point up, a 2.5 minimum, attend class every day, and not miss any team workouts or team events," he said. "The hardest part right now is keeping up with all the required reading and writing."

Wheelchair basketball has been a part of Tomas' life for almost five years, ever since he attended Camp Xtreme, sponsored by the TIRR Foundation. Tomas, who has spina bifida, was invited to attend the camp after having surgery to relieve pain caused by a vertebrae pinching his spinal cord.

Tomas became a member of the Houston Hotwheels, sponsored by TIRR, and then a member of the Houston Rolling Rockets Division II wheelchair basketball team. Participating in tournaments and competing against higher levels of competition spurred Tomas to practice even more.

"Instead of watching movies, or doing something else, I would play basketball," he



"Climbing helps me mentally and physically, especially with conditioning, balance, and walking,"

said. "Then, college folks started talking to me, but my grades were not good enough. When I couldn't play for so many months (because of the surgeries) and I couldn't get my grades back up because of missing so much school, most colleges lost interest in me except for the University of Texas-Arlington, Arizona, and Oklahoma State.

"I felt comfortable with the OSU coach right away, and she told me I could get a scholarship with tuition, books, and living

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expenses paid. At first I didn't believe it because I didn't have my high school diploma. But she had me come to campus to be screened and complete the paperwork and I was accepted. Now my mom is the happiest woman in the world."

Tomas was a patient at Shriners Hospital for Children - Shreveport, La., when his leg was amputated as a result of a bone infection. Shortly after, his family moved to Houston and his care continued at Shriners Hospital for Children - Texas. Through MPO's association with helping patients at Shriners, Tomas became acquainted with Ted Muilenburg, CP, FAAOP, and Scott Spring, CP.

"The people at Shriners helped me by referring me to MPO to get my first leg," said Tomas. "They always encouraged me to be the best I could be. My main doctor, Dr. Richard Haynes, was awesome and so was Rebecca Case, my therapist. Dr. Haynes and Rebecca contributed to getting me the higher tech prostheses like the Talux foot and the Harmony System. They saw how active I was and how I didn't like to stay down when I had bruises or ulcers. I was more active than other patients so I needed more than just the average prosthesis. They also said that if they helped me get the prosthesis, then I also needed to attend college."

That's a promise Tomas is working hard to fulfill.

Scott Spring, CP, who fit Tomas with his first prosthesis, said Tomas was always a patient full of life and enthusiasm.

"I first met Tomas 12 years ago, when I had the privilege of casting him for a prosthesis. Every time I would step out of the room to get something, he would either be hiding under the couch or crawling down the hallway. Tomas is still the same; he always has a big smile and he never stays put. If I take his prosthesis to make an adjustment, I can always be assured that he won't be where I left him," said Scott. "I find him rolling down the hallway on an exam stool to visit with other patients or someone on the MPO staff. He wears me out with his questions and enthusiasm, but he always leaves me smiling."

Although he has gone through a variety of prostheses as he grew from child to adult, Tomas now wears the Harmony System, providing him full mobility.

"I was initially concerned that the system may require a little more maintenance than Tomas was used to with his other prostheses," said Scott. "But he really pushed hard to get the Harmony."

Scott Spring, CP, makes a plaster impression of Tomas' residual limb to accurately fit him with the Harmony System.

He had been wearing a Total Surface Bearing Socket (TSB) with one-way valve, sealing/suspension sleeve, and Ossur Talux foot.

"I like the Talux foot a lot, but I'm so active and I sweat a lot, so when I heard the Harmony System helps reduce perspiration, and prevents blisters, I decided I wanted that," said Tomas.

The Harmony System features an elevated vacuum assisted socket system (VASS) that secures the artificial limb to the residual limb. The elevated vacuum increases comfort, mobility, and daily activities by controlling volume fluctuation and reducing forces to the residual limb.

"I love the Harmony and the pump system. It's the best I had since I've been an amputee. I like telling people about how the pump works. It's pretty cool. I wear shorts a lot and I don't mind people seeing my leg and asking me questions about it."

The Harmony increases the feeling of proprioception, or the feeling of having control over the prosthesis. That is helpful to Tomas, as he also likes to rock climb and negotiate the ropes course, another type of climbing activity.

"Climbing helps me mentally and



physically, especially with conditioning, balance, and walking," Tomas said. "I like having a good gait and I like to run and keep up with friends. Rock climbing helps me keep my legs in better shape."

This summer, Tomas also had the opportunity to attend the University of Illinois - Urbana-Champaign Elite Camp for wheelchair basketball. The camp is by invitation only and is attended by athletes with high potential, coaches, and Paralympians.

Tomas is inspired to take his basketball game to the highest level.

"My ultimate goal is to make it to the Paralympics and get the gold," he said.

If attitude is everything, Tomas will likely attain his goal.

INSURANCE CORNER:

An Important Reminder About Changing Providers

To make sure that you receive the financial coverage to which you are entitled, it is extremely important to notify our office anytime you change your insurance provider, because a pre-authorization from one provider does not automatically extend to another.

Our paperwork with your insurance provider begins when you visit our office for the first time. However, the billing is not finalized until the day you receive your prosthesis or orthosis. If you should change providers before the prosthesis or orthosis is delivered, the insurance carrier that you started out with is not responsible for its costs and the current provider will not provide coverage without preauthorization. The result may

be that you, the patient, has to assume full financial responsibility.

That's why if your private insurance carrier changes, if you change HMOs, or become eligible for Medicaid, we must know immediately so we can route the paperwork to your current provider.

As always, the staff of Muilenburg Prosthetics and Orthotics is at your service for any questions you may have regarding insurance coverage and preauthorization requirements.

Muilenburg Prosthetics and Orthotics is an approved provider for Medicare, Medicaid, Veterans Administration, and most other third party reimbursement sources.

Harmony® System Controls Volume and Enhances Comfort

The practitioners at Muilenburg Prosthetics and Orthotics understand that a proper-fitting socket is the key to patient mobility and comfort. While componentry varies according to the physiology and needs of each patient, there are many who benefit from the Otto Bock Harmony® System with VASS™ (Vacuum Assisted Socket System) technology.

Harmony was developed in response to volume fluctuations in patients' residual limbs. As amputees know, the residual limb doesn't stay the same size all day when wearing a prosthesis; studies have shown that a patient can lose between 6 to 12 percent of the residual limb's total volume through perspiration, edema and other fluid movement. This results in the prosthesis becoming loose and causing skin irritation, which may lead to uncomfortable and unstable movement.

The Harmony System addresses this issue by reducing variations in limb volume through a total surface weight-bearing socket, a mechanical pump that draws air out of the system during normal walking; a sealing sleeve that makes an air-tight seal

with the user's liner and body; an adjustable shock absorber; and a torsion adapter to increase walking comfort and relieve the strain on joints and the spine.

The components work together to create an elevated vacuum environment. The result for the user is that the liner is drawn completely into the socket for a more intimate fit, allowing fluids to be more easily drawn back into the leg during each swing phase. This increases healthy fluid flow and maintains consistent volume to reduce forces on the limb.

Otto Bock has recently introduced a new component to the system, the e-pulse Volume Management System, which MPO practitioner Andre Martinez, CP, observed at the recent American Orthotic & Prosthetic Association (AOPA) National Assembly, held in Las Vegas Sept. 17-20. AOPA is a national trade association committed to providing high quality, unprecedented business services and products to orthotic and prosthetic professionals.

The e-pulse can be adjusted to four different vacuum levels to suit patients' needs.

Two buttons control the e-pulse and the vacuum turns on and off automatically. Patients just set the desired level of vacuum, then can ignore it the rest of the day.

As with all technology, not every prosthetic component works for every patient. Discuss with your MPO practitioner whether the Harmony System is suitable for you.



Andre Martinez, CP, discusses socket technology with an Otto Bock representative at the recent AOPA National Assembly.

Prosthetists Learn to Fit MAS Socket

The Marlo Anatomical Socket (MAS) Design is a new development in ischial containment (IC) socket concepts. With this socket, patients can sit more comfortably with no plastic beneath the gluteus. It allows for a full range of motion, better functional gait and stability, and a nearly invisible cosmesis.

After an intensive two-day course, every practitioner at Muilenburg is qualified to fit this socket for appropriate MPO patients.

The MAS course, which took place in June, was taught by the man who developed the design - Marlo Ortiz Vazquez Del Mercado of Ortiz Internacional, S.A. de C.V., Mexico - together with John Michael, CPO, and Agnes Curran, CP; MPO practitioners Ted Muilenburg, CP; FAAOP; Earl Fogler, CP; Scott Spring, CP; Andre Martinez, CP; and Richard Brunner, CP, attended.

According to Scott Spring, CP, the course entailed lecture and "hands on" measurement, casting, cast modification,

test fitting and adjustments. There were six volunteer patients who served as models, and each practitioner was able to fabricate

two test sockets for their model. "The instructors were very attentive to all aspects of the process," Scott said.

"Although the course was intense and very tiring, everyone seemed to enjoy learning a new skill."

Over the past few months since the course, MPO practitioners have been fitting the MAS socket for their patients. "We have a few of these sockets in the works at this time,"

Scott said, explaining that this socket design is not be for everyone - more experienced prosthetic wearers may have a harder time

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At left, Scott Spring, CP, left, learns the MAS fitting process as visiting expert John Michael, CPO, offers guidance. Below, Marlo Ortiz Vazquez Del Mercado, designer of the MAS socket, and John Michael work with the MPO staff.



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Stan Vydral Receives His ABC Certification

Stan Vydral earned the honor of putting CP, certified prosthetist, after his name when he was granted his ABC certification

number in August. While it is true that many people can go to school and begin practicing, Stan has taken it to the next step, receiving his ABC certification so that he can provide patients with the highest level of care.

Stan earned his bachelor's degree in biology in 1994. Feeling that his job as a quality control technician at a plastics plant was unrewarding, he went back to



school at the age of 35 for his prosthetic training at California State. "So many jobs are just jobs," Stan said. "I was looking for more than just a paycheck."

Through an acquaintance, Stan heard about Muilenburg. "It was the best thing that could've happened," he said. He was a resident at Muilenburg from June 2005 to June 2006, and was immediately hired on. "Now my work is rewarding. No one in town can beat the expertise at Muilenburg. Here, patients are priority."

For the past 11 years, he has lived in League City (just south of Houston) with his wife Gloria. They have two sons - Seth is four and Connor is eighteen months.

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getting used to some of the trimlines.

"There is a learning curve associated with fitting this style of socket, and it requires more test fittings to get a proper fit," Scott said. "But overall, the socket should promote improved sitting comfort, increased range of motion, and improved cosmesis and prosthetic control."



Marlo Ortiz explains fabrication of the MAS socket.